

# **EXHIBIT A**

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1                   UNITED STATES DISTRICT COURT  
2                   NORTHERN DISTRICT OF CALIFORNIA  
3                   SAN FRANCISCO DIVISION  
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6                Oracle America, Inc.

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8                v.    Case No. 3:10-cv-03561 WHA  
9                Google Inc.  
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12               HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY  
13               Video Deposition of Iain M. Cockburn, Ph.D.  
14               Friday, February 10, 2012  
15               Analysis Group  
16               111 Huntington Avenue - 10th Floor  
17               Boston, Massachusetts 02199  
18  
19

20               ----- J. Edward Varallo, RMR, CRR -----  
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25               PAGES 1 - 178

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1       in valuing patents, which is to focus upon the  
2       patent as being the object of interest in an  
3       economic or commercial sense. So I am not aware of  
4       license negotiations which are conducted at the  
5       level of specific claims, nor am I aware of efforts  
6       to value patents or portfolios of patents outside of  
7       a licensing negotiation which is conducted at the  
8       level of distinguishing one claim from another. Nor  
9       do I -- So that was the level at which I was  
10      conducting this analysis, which is consistent both  
11      with industry practice and what economists believe  
12      is measurable in this context.

13           Secondly, I had an eye on, if you like, on  
14      the analysis that I wrote in the other part of my  
15      report where I asked myself the question: Is there  
16      a meaningful difference for distinguishing or being  
17      able to discriminate between damages in this context  
18      and for these patents as applied to one claim versus  
19      another claim?

20           And thirdly, I don't believe Dr. Reinhold  
21      was able to conduct the work that he did at the  
22      level of considering the contribution of individual  
23      claims to the portfolio. Neither Dr. Reinhold nor  
24      I, nor in my opinion persons engaged in a  
25      hypothetical negotiation about this specific

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1 portfolio of patents would have been thinking about  
2 this portfolio as an aggregation of claims; they  
3 would have been thinking about it as an aggregation  
4 of patents.

5 Q. Is there anything in your report that  
6 attempts to break out the value of the unasserted  
7 claims of the patents in suit versus the asserted  
8 claims?

9 A. I don't draw that distinction in this  
10 apportionment analysis, no.

11 Q. Let's move on to paragraph 405 on page  
12 152. I would like to talk a little bit about the  
13 studies that you used as your reference for the  
14 distribution of the value of the patents within the  
15 portfolio.

16 MR. NORTON: I don't want to get in your  
17 way. We're coming up on noon and if we could take a  
18 break at some point in the near term, I'd appreciate  
19 it.

20 MR. PURCELL: Yeah, that's fine, that's  
21 fine.

22 BY MR. PURCELL:

23 Q. So in paragraph 405 you mention that you  
24 used three recent studies of patent value to  
25 document the distribution curves of the value of

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1           A.     Yes.

2           Q.     Are you aware of any other similar studies  
3     that reached conclusions that the top 1 percent of  
4     the patents account for value outside of that 42 to  
5     78 percent range?

6           A.     Well, that may be. There may be some  
7     numbers in some of these studies -- If you have  
8     looked at them, I think you will appreciate that  
9     many of them are complicated analyses that look at  
10    different cuts of the data in different ways or use  
11    different methodologies or try different  
12    experiments. A range of 42 to 78 percent I think  
13    spans in my view the range which the literature  
14    points us to.

15                 The stylized fact, if you like, if you  
16    poked an economist who's worked on these problems  
17    and asked them, you know, what share of the value of  
18    a portfolio of patents would the top 1 percent  
19    likely account for? I think they would likely say  
20    "Well, probably 50 to 75 percent," based upon some  
21    synthetic appreciation of all the results in the  
22    literature.

23           Q.     The three studies you relied on and that  
24    are discussed in Exhibit 34 and Exhibit 35, there's  
25    the PatVal study, the Harhoff study and the Barney

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1 study?

2 A. Yes.

3 Q. Taking them one at a time, with respect to  
4 the PatVal study, do you know how that study  
5 selected the population of portfolios that it used  
6 as its dataset?

7 A. Well, it didn't use a population of  
8 portfolios; they looked at a population, a sample of  
9 patents. The sample of patents was -- I mean, these  
10 results come from a broader research project, which  
11 was to survey European inventors about a variety of  
12 things. One of the items of interest that the  
13 people who conducted this study asked was for these  
14 inventors to provide some information about the  
15 value of one of their patents.

16 So the selection of that portfolio I think  
17 roughly could be understood as a random sample of  
18 inventors on patents from a particular application  
19 cohort.

20 Q. The PatVal survey, was the dataset  
21 exclusively European patents?

22 A. Yes.

23 Q. No U.S. patents?

24 A. No U.S. patents.

25 Q. And it was a sampling of patents from a

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1 variety of inventors throughout Europe. Correct?

2 A. Yes.

3 Q. It wasn't looking specifically at  
4 portfolios, it was constructing a portfolio by  
5 aggregating patents taken from various inventors?

6 MR. NORTON: Objection to form.

7 A. Well, as I said, it wasn't a study about  
8 portfolios; it was a study about patents. They  
9 looked at a sample of patents.

10 Q. And they concluded that within that sample  
11 of patents the distribution was significantly skewed  
12 in terms of the value, with a small number of the  
13 patents in that sample containing a large percentage  
14 of the value?

15 A. Yes.

16 Q. What sorts of technology areas were  
17 covered by the patents in the PatVal study?

18 A. Most.

19 Q. There wasn't any particular focus?

20 A. There was no particular focus, as I  
21 recall. I mean, it was a broad-based study based on  
22 a random sample of inventors.

23 Q. Okay, let's -- Well, strike that. Staying  
24 with the PatVal study for a minute, how did that  
25 study go about estimating the value of the patents

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1       within the sample?

2           A.     They asked the inventors to the extent  
3     that they had knowledge about the value of their  
4     patent to report on this survey instrument their  
5     assessment of its value.

6           Q.     Was that all done through self-reporting  
7     by the inventors?

8           A.     Yes, self-reporting.

9           Q.     Was there any sort of auditing mechanism  
10    that the study authors used to make sure that they  
11    were getting good information from the inventors?

12          A.     I'd have to check back, look at the paper.  
13        I know from conversations with Dr. Gambardella, who  
14       was one of the lead authors on this study, that they  
15       had done some general and quite careful pretesting  
16       and validation of the whole survey questionnaire.  
17       I'd need to go back and look at the study report  
18       more carefully to be able to answer that  
19       definitively yes or no.

20          Q.     In terms of asking the inventors about the  
21     value of the patents, did the study for instance ask  
22     them whether they licensed the patent for a sum of  
23     money? How were the inventors asked to actually  
24     calculate a value?

25           MR. NORTON: Objection to form.

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1           A.     Well, the inventors weren't asked  
2 necessarily to calculate a value. They were asked  
3 to report what they knew about the value of these  
4 patents. So it could be that the patent had been  
5 sold or reassigned outright, or it could be that  
6 they were aware of licensing royalties, or it could  
7 be that they used some other kind of data to....  
8 I mean, they were assigning the value of a patent to  
9 a specific number or a specific range of numbers.

10          Q.     The inventors, was there any sort of  
11 consistent valuation methodology that the inventors  
12 used? For instance, did they all refer to revenue  
13 that had been generated by the patents through some  
14 products or was there some other way that value was  
15 reported?

16          A.     I'd need to go back and look at the  
17 footnotes to the paper. I would characterize it  
18 generally as self-reporting by inventors of their  
19 knowledge or assessment of the value of these  
20 patents.

21           MR. PURCELL: All right, let's take our  
22 lunch break.

23           THE VIDEOGRAPHER: The time is 12:07 p.m.  
24 We are going off the record. This will be the end  
25 of tape 2 in the deposition of Dr. Iain Cockburn.

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1                             (Luncheon recess at 12:08 p.m.)  
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2 AFTERNOON SESSION

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12:50 p.m.

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5 THE VIDEOGRAPHER: We are back on the  
6 record. The time is 12:50 p.m. This is tape number  
7 3 in the deposition of Dr. Iain Cockburn.

8 BY MR. PURCELL:

9 Q. Dr. Cockburn, before lunch we were  
10 discussing the studies that you relied on in  
11 assessing the value of the most valuable patents in  
12 the Sun portfolio. Do you recall that?

13 A. Yes.

14 Q. And we discussed the PatVal study.  
15 I would like to move on to the Harhoff study. Do  
16 you know how the sampling of the patents that were  
17 analyzed in that study were selected?

18 A. Well, again I'm a little bit hesitant to  
19 try to recall from memory specific details of these  
20 specific studies. I mean, I can reassure you as  
21 I did before lunch that I have looked carefully at  
22 these studies and satisfied myself that their  
23 methodology was in my view sound and that the  
24 results I could place some reliance upon in  
25 performing my analysis.

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1           Q.     Do you know if the Harhoff study looked at  
2     patent portfolios and the distribution of value  
3     within portfolios or did it look at individual  
4     patents and their values as the PatVal study had  
5     done?

6           A.     I'd prefer if you showed me the document  
7     and then I'll refresh my memory.

8           Q.     Well, I don't have the document with me.

9           MR. NORTON: If the only obstacle is  
10    having the document, we can get copies of those for  
11    you.

12    BY MR. PURCELL:

13    Q.     Do you recall how the Harhoff study went  
14    about selecting the patents that it analyzed?

15    A.     Well, I can't -- I reviewed for my own  
16    interest as a referee for peer-reviewed journals  
17    that have published this type of stuff and for other  
18    purposes dozens of these kinds of papers; and I'm  
19    afraid that, sitting here, I can't recall  
20    specifically the answer to the question you're  
21    asking with sufficient certainty to testify to it  
22    under oath. I don't want to tell you, give you the  
23    wrong answer when I'm referring to a methodology  
24    which was in a similar paper by the same author or  
25    some other such problem.

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1                   So I'll just reassure you that I have  
2         reviewed the particular studies that I cite quite  
3         carefully and I'm satisfied that they use a reliable  
4         methodology.

5                  Q.     Do you know whether the Harhoff study  
6         focused on any particular technology area?

7                  A.     As best I recall, it was agnostic with  
8         respect to technologies.

9                  Q.     So it didn't focus on one specific  
10        technology area, for instance, mobile or Java  
11        technology as the Sun portfolio is concentrated in?

12                 A.     Well, no, it didn't. And I'll add to that  
13        the observation that this literature, which has used  
14        a variety of methods, a variety of indicia of patent  
15        value, a variety of different samples, some of these  
16        studies have done breakdowns by broad technology  
17        classes such as biopharmaceutical versus electronic.  
18        The finding which emerges with great regularity is  
19        the one with which we began this discussion before  
20        lunch, which is that there is this highly skewed  
21        distribution and typically you would expect the top  
22        1 percent of patents in any set of patents to  
23        account for 50 to 75 percent, in round numbers, of  
24        the economic value of the entire set.

25                 Q.     Do you know if the Harhoff study --

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1           A.     And that has held up, as I said, to  
2     different time periods, different methodologies,  
3     different sets of patents in different countries,  
4     slicing and dicing by technology area and so forth.  
5     I think it's a very robust and reliable result.

6           Q.     Speaking of different countries, do you  
7     know if the Harhoff study was looking at U.S.  
8     patents or patents from some other geographic area?

9           A.     The Harhoff study was focused, the  
10    specific one I cite here I believe was focused on  
11    German patents. I know Dr. Harhoff has done similar  
12    research where he's matched the sample of German  
13    patents he's used as best he could to their  
14    equivalent patents in the United States and has  
15    found broadly similar results.

16          Q.     And was that done by Dr. Harhoff in the  
17    study that you rely on and cite in this report or  
18    some other study?

19          A.     No, I think it was in another study.

20          Q.     And, do you know, is that other study  
21    cited anywhere in your report?

22          A.     It's not cited in my report. It's almost  
23    certainly cited, as I suggested to you, in the  
24    references, the reference list at the backs of these  
25    papers.

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1           Q.     And with respect to the Harhoff study, do  
2     you know how the estimates of value of patents in  
3     that study were derived? Was it self-reporting by  
4     patentee again?

5           A.     I think it's based essentially on self-  
6     reporting. And I know in his work, you asked the  
7     question before lunch about validation, and I know  
8     Dr. Harhoff has -- whether or not it's in this  
9     particular study, I'd have to look at the document.  
10    But Dr. Harhoff has certainly, to my knowledge, made  
11    efforts to validate the reported -- to validate the  
12    reported values of patents independently.

13           Now, with respect to the PatVal study, I  
14    think that -- I don't know whether it's necessarily  
15    reported in the document that I cite here, but I'm  
16    pretty sure it's the case that for some subset of  
17    the patents in their sample, they not only asked the  
18    inventors for their assessment of the value of the  
19    patent at the day it was issued, but they also  
20    independently asked I think it was the inventor's  
21    boss or senior manager or internal counsel or some  
22    other independent person at the same organization to  
23    provide an independent assessment of the value of  
24    the same patent roughly in the same context.

25           So I think it's not the case, as you

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1        appear to be suggesting to me, that these studies.  
2        don't attempt to validate the methodology.  
3        Generally speaking they do. And whether it will be  
4        reported in that specific paper that I cite or in  
5        another paper which uses the same set of data and  
6        performs a related study I can't pin down for you.

7           Q.      Is there any discussion in the literature  
8        of whether the distribution of the value of patents  
9        within a portfolio is any different in the United  
10      States versus other countries?

11          A.      What comes to mind, as I think I just  
12        said, the fact which emerges looking at the totality  
13        of these studies is that the degree of skewness  
14        observed is surprisingly similar across different  
15        periods of time, different technologies, different  
16        methodologies, you know, different ways of  
17        approximating or deriving patent value.

18          Q.      With respect to the Barney survey, I don't  
19        know if you recall sitting here, but do you remember  
20        how the population of patents analyzed in that  
21        survey was determined?

22          A.      Well, as I recall, I think it was about a  
23        sample of 76,000 patents. Again, I think it -- I  
24        think it was based on a particular application  
25        cohort and not restricted to particular

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1        technologies. But, I mean, that's my recollection  
2        of it. I would want to confirm that by looking at  
3        the study.

4           Q. And when you say application cohort, you  
5        mean patents that were applied for during a  
6        particular time period?

7           A. Yes.

8           Q. Do you recall the length of that time  
9        period?

10          A. No. I'm thinking -- No, it's relatively  
11        early in time, it might well be, although it was  
12        applied for in a calendar year. Again, you know,  
13        you're asking me to fish in my memory about  
14        something that I can't be certain of.

15          Q. And the Barney study, that looked at U.S.  
16        patents. Correct?

17          A. That looked at U.S. patents.

18          Q. The valuation of the individual patents in  
19        the Barney study, how was that determined?

20          A. Well, the Barney study, I was just  
21        speaking about a variety of methods. So the Barney  
22        study is among those which look at whether or not a  
23        patent is renewed in the sense of the assignee pays  
24        their renewal fee at the Patent Office on the  
25        required date and uses that as an indicator of a

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1 lower bound on the value of the patent. If the  
2 owner of the patent decides it's not worth paying  
3 \$500 to renew the patent for the next period of its  
4 term, then you know it's worth less than \$500.  
5 Conversely, if they do decide to pay the annual fee,  
6 it must be worth at least \$500.

7 This is an idea which goes back to some of  
8 the very earliest studies on this topic done in the  
9 early 1980s by Pakes, P-a-k-e-s, and Schankerman,  
10 S-c-h-a-n-k-e-r-m-a-n.

11 Q. With respect to the population of patents  
12 that were renewed and that are worth \$500 or more,  
13 how did the Barney study go about determining more  
14 specific values of those patents?

15 A. Well, you can back out from these data  
16 inferences about the value of patents at different  
17 points based upon these lower-bound numbers where  
18 you know a fraction dropping out are worth less than  
19 some number.

20 Q. Did the Barney study look at anything  
21 other than whether or not patents within the  
22 population were renewed in determining value and  
23 then drawing conclusions from that fact?

24 MR. NORTON: Objection to form.

25 A. Well, there's two pieces of information,

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1       one of which is: Was the renewal fee paid? And  
2       secondly with respect to how much is the remaining  
3       lifetime of the patent? So the Barney study is  
4       driven off of those two things, which he uses to  
5       infer some value.

6                 None of these -- So looking at renewal  
7       fees is one way people have looked at this. Other  
8       studies have looked at reassignment of patents.  
9       Other studies have looked at what we call  
10      bibliometric indicators, such as citations or the  
11      pattern of citations. There's a lot of correlates  
12      to the economic value of patents which have been  
13      looked at in this sense.

14               What I believe I have been able to show  
15      here is I've looked at a variety of studies which  
16      use a variety of methods and base their conclusions  
17      on a variety of indicators of patent value, to show  
18      that they all come back to the same conclusion.

19               Q.     What if anything did you do to satisfy  
20      yourself that the population of patents that were  
21      examined in these studies are comparable to the Sun  
22      portfolio that is at issue in this case?

23               A.     I think I didn't -- You know, I wasn't  
24      able in the time available to conduct my own, if you  
25      like, reference study. I could imagine one might

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1 want to try to replicate the methodology of one of  
2 these studies but to a sample of patents which was  
3 constructed to look like the portfolio in question.  
4 One could imagine there's things one could do. I  
5 don't know that they're feasible to do quickly or  
6 reliably.

7 What I -- My conclusion here is based on  
8 the assumption that this portfolio of patents is  
9 similar in the sense -- Let me try to say this more  
10 coherently.

11 As I've said a few times, it's striking  
12 that these types of studies done for many different  
13 sets of patents and in many different contexts using  
14 many different methodologies all point to a  
15 conclusion which I don't think is controversial,  
16 which is that the value distribution is highly  
17 skewed. So based upon that, it is my opinion that I  
18 have no reason to believe that the 569 patents of  
19 interest here would have a value distribution which  
20 is any less skewed than that which has been found so  
21 many times in so many different circumstances.

22 Q. Are you aware of any studies that have  
23 looked at a single portfolio of patents -- Strike  
24 that.

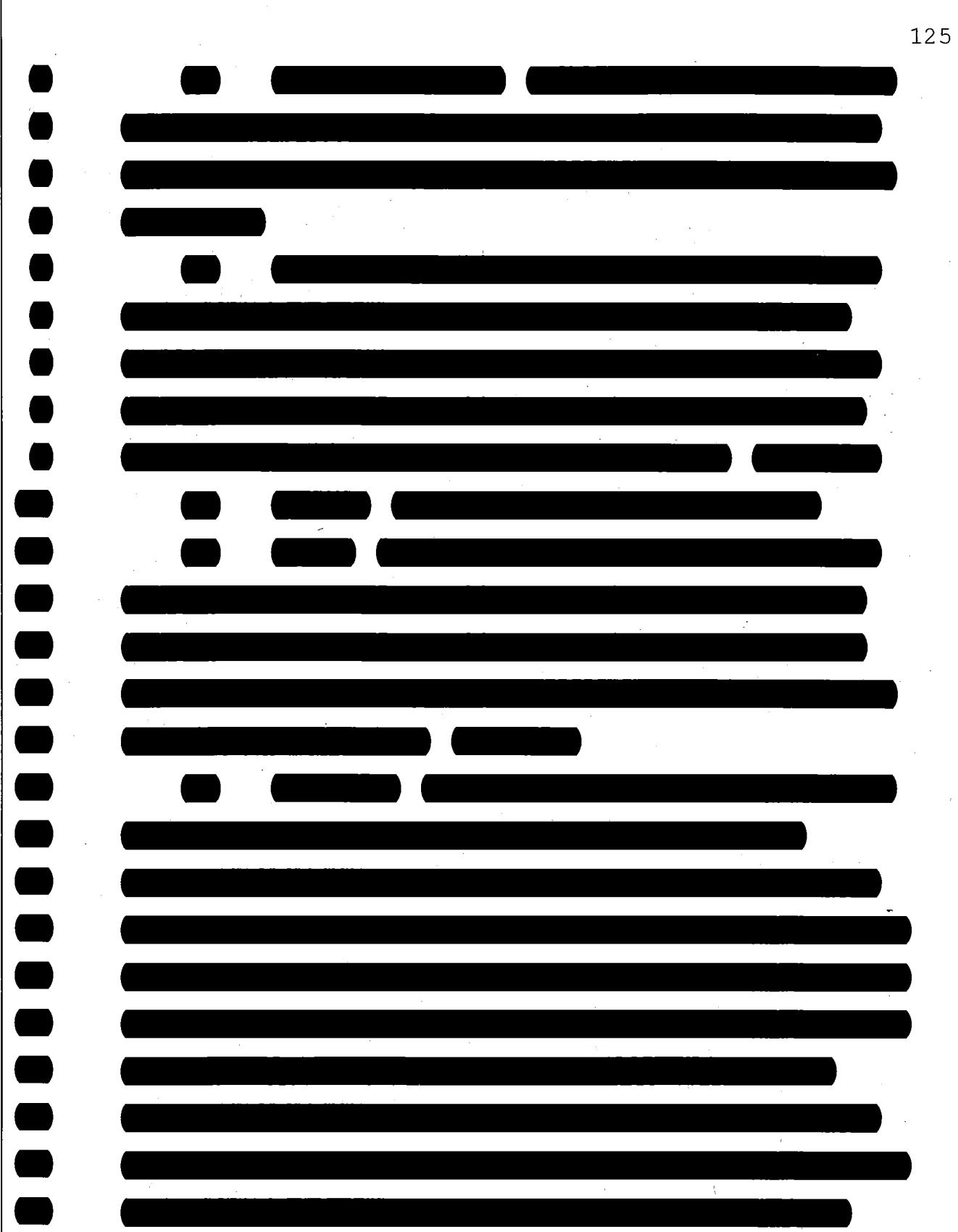
25 Are you aware of any studies that have

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1           Q.     So we've talked about the importance of  
2     the functionality, the importance of the patents to  
3     improving the functionality, and the lack of good  
4     alternatives to the patented technology. What other  
5     bases are there for your independent significance  
6     approach besides those?

7           A.     I'm sorry. Could we maybe take a break?  
8     I'm really struggling to hold your questions in my  
9     mind as you formulate them. If you would like to  
10   repeat it, I can try to answer it.

11          Q.     Sure. Would you like to take a break?  
12     Well, if it's something that's going to be fixed by  
13     taking a break.... I'm happy to repeat the  
14     question.

15           We have discussed the importance to Google  
16     of certain functionality, the benefits the patents  
17     provide in improving that functionality, and the  
18     lack of non-infringing alternatives. And I'm  
19     wondering what other bases are there for your  
20     independent significance approach other than those  
21     things?

22          A.     Well, I don't know that I would  
23     characterize the bases of my independent  
24     significance approach using the categories or the  
25     labels that you are using. I base my evaluation of

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1       the significance of these patents relative to other  
2       patents that might be in the portfolio based upon a  
3       variety of evidence.

4           Q.     All right. Well, why don't you tell me  
5       what that evidence is.

6           A.     Which is discussion in the record as to  
7       the value that Google itself placed upon this type  
8       of functionality; benchmarking studies that I did or  
9       engineers at Oracle did; the work that Dr. Shugan  
10      did using conjoint analysis to evaluate user  
11      preferences or the significance of this  
12      functionality as a basis for demand.

13           My qualitative findings from econometric  
14      work I would not say were a basis for this  
15      determination that I relied upon determinatively but  
16      it's certainly something I considered to the extent  
17      that I believe my econometric work demonstrates  
18      another way of demonstrating the relationship of the  
19      patented functionality to consumer demand. I look  
20      also at Dr. Reinhold's work in grouping and ranking  
21      these patents in terms of their technical merit or  
22      significance.

23           So that's the range of evidence that I  
24      look to and consider in arriving at my determination  
25      as to an apportionment percentage based upon this

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1 independent significance approach.

2 Q. Is there anything else that forms the  
3 basis of your independent significance approach  
4 other than the things you've just listed?

5 A. Those are the specific criteria, the  
6 specific studies or pieces of evidence or things  
7 I've taken into consideration. I have also relied  
8 upon my general knowledge and experience, my  
9 participation in and knowledge of the academic  
10 researches in this field, the work that I've done  
11 with the Licensing Executives Society on  
12 understanding licensing practices and related issues  
13 which relate to patent valuation; dozens of  
14 conversations over the years with people involved in  
15 licensing or valuing or managing intellectual  
16 property. All of those things put together inform  
17 the basis of my independent significance assessment.

18 MR. NORTON: Mr. Purcell, before you go on  
19 to the next question, do you still need a break?

20 THE WITNESS: I really would like to take  
21 a break, if you don't mind.

22 MR. PURCELL: Yes, that's fine.

23 THE VIDEOGRAPHER: The time is 1:57 p.m.  
24 We are going off the record.

25 (Short recess taken.)

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1                   THE VIDEOGRAPHER: We are back on the  
2 record. The time is 2:09 p.m.

3 BY MR. PURCELL:

4                   Q. Dr. Cockburn, before the break we were  
5 talking about the bases of your independent  
6 significance approach. Correct?

7                   A. Correct.

8                   Q. You rely on those bases to reach an  
9 apportionment figure of 25 percent for the patents  
10 in suit. Correct?

11                  A. Correct.

12                  Q. How do you get the 25 percent?

13                  A. Well, it's a judgment based on my  
14 expertise and my consideration of the evidence that  
15 we talked about just before the break.

16                  Q. Is there any quantification in the  
17 evidence that we talked about before the break that  
18 you can point me to in supporting the 25 percent  
19 conclusion?

20                  A. Are you asking about -- ? I'm sorry. Did  
21 you ask me was there any of the evidence  
22 quantitative?

23                  Q. Correct.

24                  A. Well, certainly. So the results of  
25 benchmarking are quantitative evidence. The factor

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1 by which execution speed is affected by disabling  
2 the patented functionality, I mean, that's a hard  
3 number. That's 80 percent. The conjoint analysis,  
4 the results of the conjoint analysis have a  
5 quantitative expression as to how users' preferences  
6 would drive a counterfactual set of market shares in  
7 the experiment that Dr. Shugan conducted based upon  
8 his conjoint survey. To the degree that I looked to  
9 the dollar implications, these market share impacts,  
10 which as I suggested and told you earlier, I think  
11 are corroborative or supportive but not  
12 determinative of my assessment of 25 percent.

13 I mean, those are numbers, 50 or 75 or 100  
14 million dollars in what I call incremental Android  
15 revenue to Google will be at stake depending on  
16 whether or not you had implemented the patented  
17 functionality or not. So all those are quantitative  
18 facts that go into and form part of my assessment,  
19 my evaluation.

20 Q. How do you get from those numbers that you  
21 just cited in the data to the 25 percent conclusion?

22 A. Oh, so you're asking me do I have a  
23 formula into which I could plug those numbers and  
24 that would give an answer which equals 25 percent?

25 Q. Well, that would be one way of doing it.

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1 Have you done it that way?

2 A. No.

3 Q. Without having a hard and fast formula  
4 that would lead to the 25 percent, is there any line  
5 you can draw from any sort of quantitative base  
6 figure to the 25 percent?

7 MR. NORTON: Objection to form.

8 A. No. My conclusion that at least 25  
9 percent is based upon my synthetic assessment of all  
10 of that evidence in light of my knowledge and  
11 experience and expertise.

12 Q. You said in your report at one point, I  
13 know we discussed this earlier, that the conjoint  
14 analysis was not used in the independent  
15 significance approach. If you want to look at the  
16 text, it's in paragraph 423.

17 A. I hope I was clear in my answer to that  
18 question, and maybe I wasn't, that perhaps that is  
19 not as well worded as it might be. What I meant by  
20 that sentence was I don't rely upon the application  
21 of conjoint analysis in the way that I did in my  
22 September report to form my independent significance  
23 assessment.

24 Q. And in what way do you rely on it in  
25 forming your independent significance assessment?

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1 Strike that. Let me ask it again.

2 In what way do you rely on Dr. Shugan's  
3 conjoint analysis in forming your independent  
4 significance assessment?

5 A. Didn't I -- ? Didn't you ask me this this  
6 morning?

7 Q. I may have done.

8 MR. NORTON: I'll object on that ground.

9 But answer the question.

10 A. Well, I rely on it specifically in coming  
11 up with my determination that the patents in suit  
12 constitute at least 25 percent of the value of the  
13 intellectual property component of the 2006 license  
14 bundle. Qualitatively in the sense it's my judgment  
15 looking at the results of Dr. Shugan's analysis that  
16 the functionality enabled by the patents or by the  
17 copyrighted APIs has a substantial and significant  
18 impact upon user preferences as translated into the  
19 market share predictions of the conjoint model.

20 Q. Do you rely on the conclusions of the  
21 conjoint model -- Strike that. Do you rely on any  
22 of the quantitative conclusions of the conjoint  
23 model in developing your independent significance  
24 approach?

25 A. Well, yes. I think it's both informative

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1        qualitatively and quantitatively in that the market  
2        share effects are not just statistically  
3        significant; they're also pretty large. The  
4        impacts, if you go to Exhibit 5 in my report --

5           Q.      Did you want to point me to something in  
6        Exhibit 5?

7           A.      As I was going to go on to say there, I  
8        find Dr. Shugan's work, and maybe I think we need to  
9        go look at Shugan Exhibits 4A and 4B, in and of  
10       themselves looking at those conjoint studies, points  
11       me to a substantial value placed by users.

12       Substantial also, as I suggested earlier, translates  
13       into significant impacts in terms of dollars or  
14       market share. So I would --

15           Q.      When -- Go ahead.

16           A.      That's quantitative information that  
17        I take into account in forming my assessment of at  
18       least 25 percent.

19           Q.      You keep saying at least 25 percent.  
20       What's the upper bound of that range if 25 percent  
21       is the lower bound?

22           A.      Focusing on this synthetic evaluation of  
23       this range of evidence would lead me to think that  
24       these patents are important, they're economically  
25       significant, reflecting on the share of portfolio

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1       value. That they are an important or economically  
2       significant set of patents would constitute, would  
3       suggest to me that something in the range of at  
4       least 25, possibly 50 percent, possibly more, of the  
5       portfolio value could be attributed to those  
6       patents.

7           Q.     Where is the 50 percent or more number  
8       mentioned in your report?

9           A.     It isn't. You just asked me about it. My  
10      opinion is that it's at least 25 percent.

11          Q.     Do you intend to tell the jury that the  
12      independent significance approach could result in an  
13      apportionment of 50 percent or more?

14           MR. NORTON: Objection to form.

15          A.     50 percent or more? Well, if you asked me  
16      on the witness stand could it be 50 percent or more,  
17      then my answer would be yes, it could be.

18          Q.     Based on --

19          A.     I'm comfortable with my opinion as stated,  
20      which is at least 25 percent.

21          Q.     But just to be clear, the 50 percent or  
22      more figure, we're hearing that for the first time  
23      today in this deposition. Correct?

24           MR. NORTON: Objection to form.

25          A.     50 percent is not in my report. I'm just

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1       trying to be responsive to your question.

2           Q.     So whether the number is 25 percent or  
3     50 percent or more under the independent  
4     significance approach, is there any more specific  
5     way you can describe how you get to that result  
6     other than saying you synthesized all of the various  
7     inputs we've discussed and come out with that  
8     number?

9           A.     So I have synthesized those inputs and I  
10    have put them in the context of my general knowledge  
11    and experience and my consideration of the  
12    fundamental economics that are at work here, the  
13    broader context in which we are considering this  
14    hypothetical negotiation. And in light of that and  
15    in light of my assessment of the importance of these  
16    patents, it is my opinion that at least 25 percent  
17    of the portfolio value should be attributed to the  
18    patents in suit. I don't think I can add to that.

19           Q.     Just taking a look at Exhibit 5, which  
20    I think you have in front of you.

21           A.     Yes.

22           Q.     Does Exhibit 5, the third column of  
23    Exhibit 5, reflect the fact that when the '205  
24    patent functionality was disabled, the performance  
25    of the e-mail and camera functions actually

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1       certainly involves more APIs and the question is:  
2       Would the value conveyed to Sun under this agreement  
3       be understood to include copyrights to those and  
4       additional APIs other than the 37?

5           I think it's a little bit of a stale  
6       dispute or a moot question in my mind because I  
7       think that -- I don't think there's any economic  
8       basis to believe that the value of a copyright to a  
9       larger number of APIs will be any different from the  
10      value of a copyright to 37 APIs specifically.

11       Q.     What about copyrighted works other than  
12      APIs and code libraries? Did you take those into  
13      account?

14           MR. NORTON: Objection to form.

15       A.     I'm not aware that there's any other  
16      copyrights at stake.

17       Q.     What is your basis for your understanding  
18      of which copyrights are at stake?

19       A.     Well, I haven't seen any other specific  
20      copyrights identified. If you can suggest something  
21      to me that --

22       Q.     Do you know how many copyrighted works  
23      related to Java Sun owned as of mid 2006?

24           MR. NORTON: Objection to form.

25       A.     Are you asking me about the totality of

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1        copyrighted material which has any relation to Java  
2        owned by Sun?

3            Q.     Let's start there, sure.

4            A.     Well, I don't know. If you counted them  
5        up individually, assuming there's one copyright to  
6        one small document, it could run into quite large  
7        numbers of specific copyrights.

8            I think what's important here is to focus  
9        on what's understood to be licensed within the terms  
10      of the agreement --

11          Q.     Which is --

12            MR. NORTON: I'm sorry. You're  
13      interrupting the witness's answer.

14            MR. PURCELL: I think he's done.

15            THE WITNESS: No, I'm not done.

16          A.     Within the terms of the agreements or the  
17      draft agreements, which as I recall have clauses  
18      which quite specifically limit the intellectual  
19      property to be conveyed by Sun to Google. I can't  
20      recall the precise language sitting here, but if you  
21      show me the agreement, I'll point you to it.

22          Q.     So it is your understanding that the  
23      copyright component of the 2006 bundle in the draft  
24      agreements was limited to just API specifications  
25      and code libraries?

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1           A.     It is limited in the first place to  
2        copyright which would meet the limitations of  
3        copyrighted material which would be used to be  
4        covered by the limitations in the draft agreements,  
5        principally the APIs and the underlying code  
6        libraries.

7           Q.     Is there any reference in any of the draft  
8        agreements to API libraries or API specifications  
9        and code libraries?

10          A.     I don't recall. You'd have to show me the  
11        agreement.

12          Q.     What is your basis for your belief that  
13        the copyright component of the 2006 bundle is  
14        limited only to copyrighted API specifications and  
15        code libraries?

16          A.     Well, I think it's a question of looking  
17        at -- It's a question of understanding what the  
18        limitations are in the agreements. One of the  
19        important limitations here, as I understand it, is  
20        that it refers to technology intellectual property  
21        which is limited to the product specifications as  
22        laid out in that PRD document. And I think there's  
23        the PRD document; there's communication between the  
24        parties. What these are pointing me to are  
25        relatively a small set of copyrights that are to be

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1       conveyed specifically by the agreement.

2                  Now, I know there may be other pieces of  
3                  code floating around in which a copyright may or may  
4                  not rest, some of which may or may not be in the  
5                  public domain. I think the identifiable pieces of  
6                  copyrighted material are principally the APIs.

7                  Q.     What is your basis for suggesting that the  
8                  parties in 2006 were contemplating a copyright  
9                  license that would only extend to APIs?

10                 A.     That's a limitation in the agreement that  
11                 Sun is going to convey copyrights as necessary. As  
12                 I understand them in broad brush, and again I'm not  
13                 a lawyer and I don't have an opinion as to the  
14                 specific legal language here, but Sun is conveying  
15                 copyrights necessary for Google to implement a  
16                 product as described in the PRD document. Sun is  
17                 not conveying an unlimited copyright to any and all  
18                 copyrighted materials owned by Sun, and that's  
19                 ridiculous.

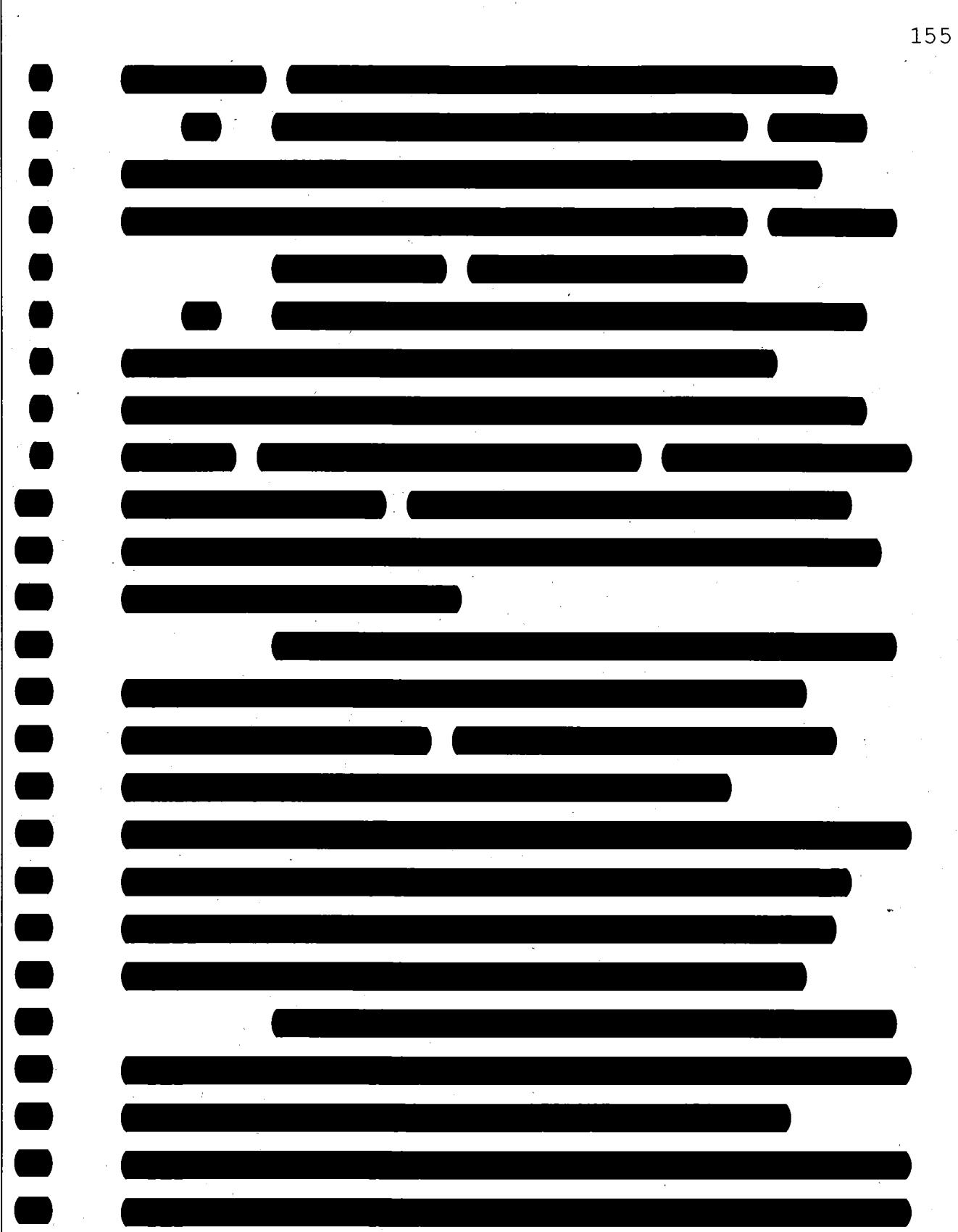
20                 Q.     Sun's Java mobile platform -- Strike that.  
21                 There were additional copyrights associated with  
22                 Sun's Java mobile platform apart from just API  
23                 specifications and code libraries. Correct?

24                 MR. NORTON: Objection to form.

25                 A.     I'm not sure what you mean. Can you be

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1 anything specific other than APIs and associated  
2 underlying code libraries.

3 Q. Sun also wrote the source code underlying  
4 its implementation of the Java virtual machine.  
5 Correct?

6 A. Correct.

7 Q. And that source code is copyrighted.  
8 Correct?

9 A. Correct.

10 Q. What is your basis for thinking that the  
11 2006 bundle would have excluded that copyrighted  
12 source code?

13 MR. NORTON: Objection to form.

14 A. I'm sorry. Can you repeat the previous  
15 question before you asked me what my basis was? Or  
16 just --

17 Q. The source code underlying Sun's  
18 implementation of the Java virtual machine is  
19 copyrighted. Correct?

20 MR. NORTON: Objection to form.

21 A. Correct.

22 Q. So what is your basis for your opinion  
23 that the copyright aspect of the 2006 bundle would  
24 exclude that copyrighted source code?

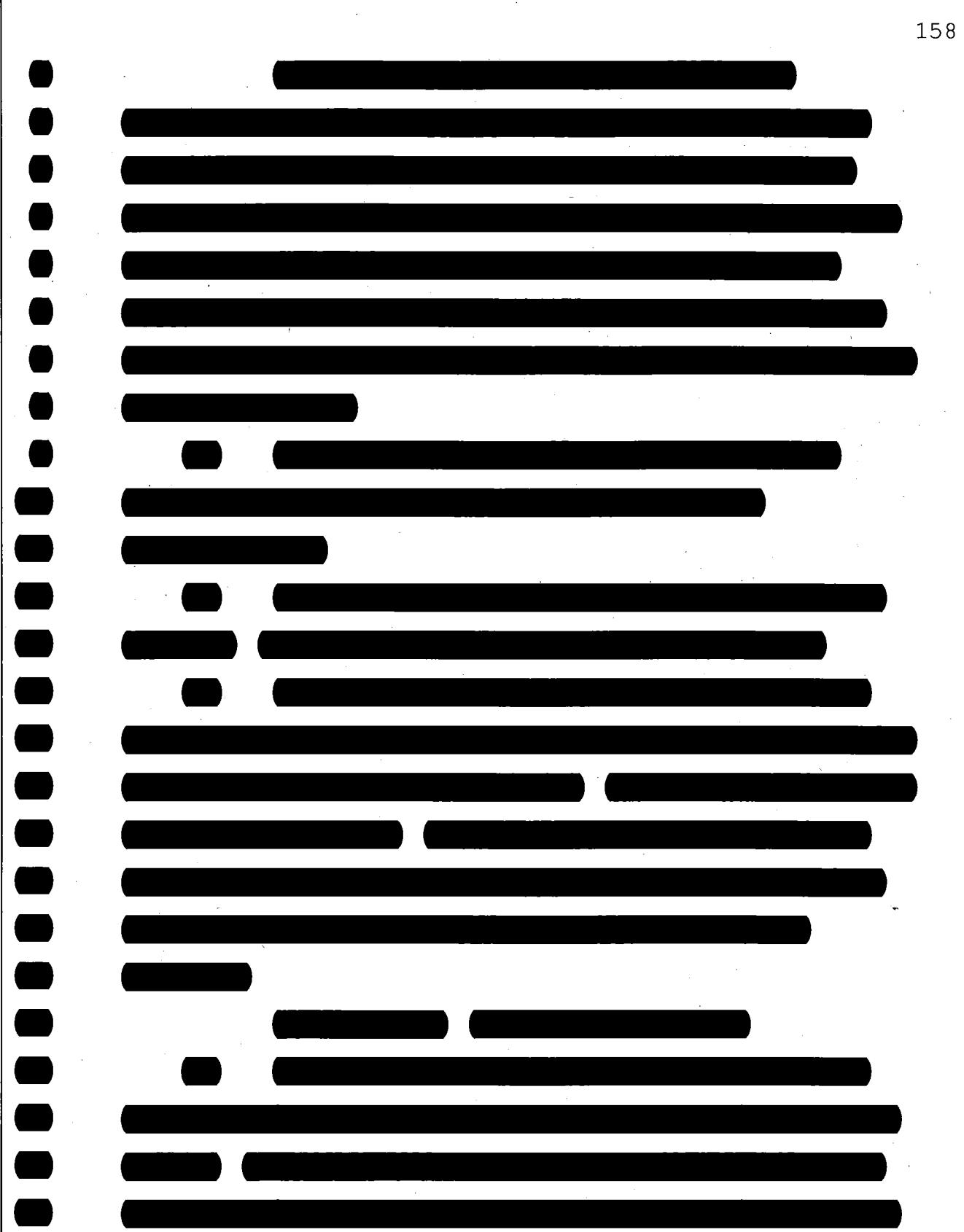
25 MR. NORTON: Objection to form.

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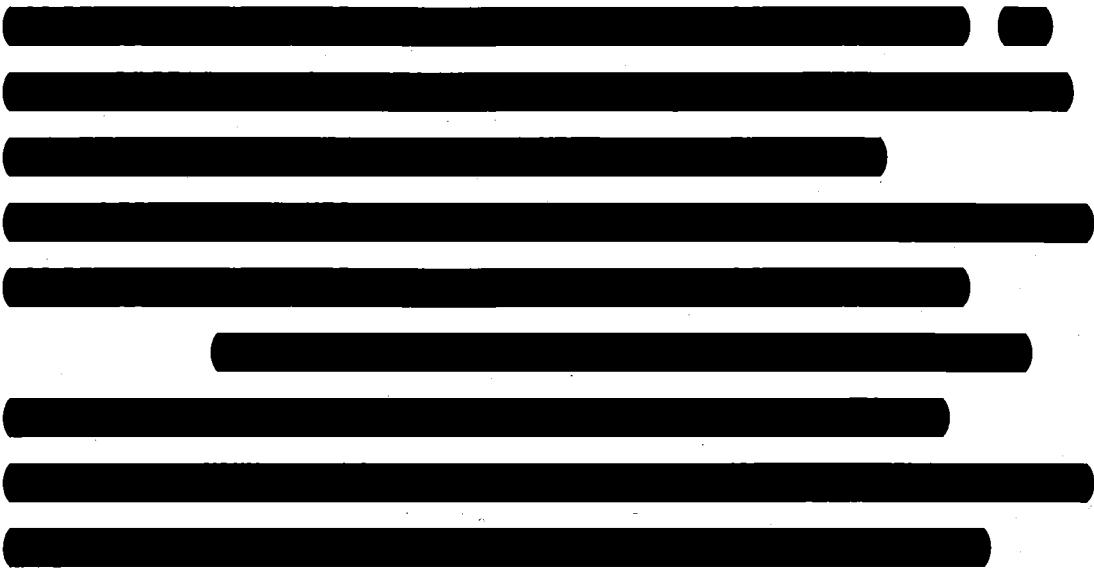
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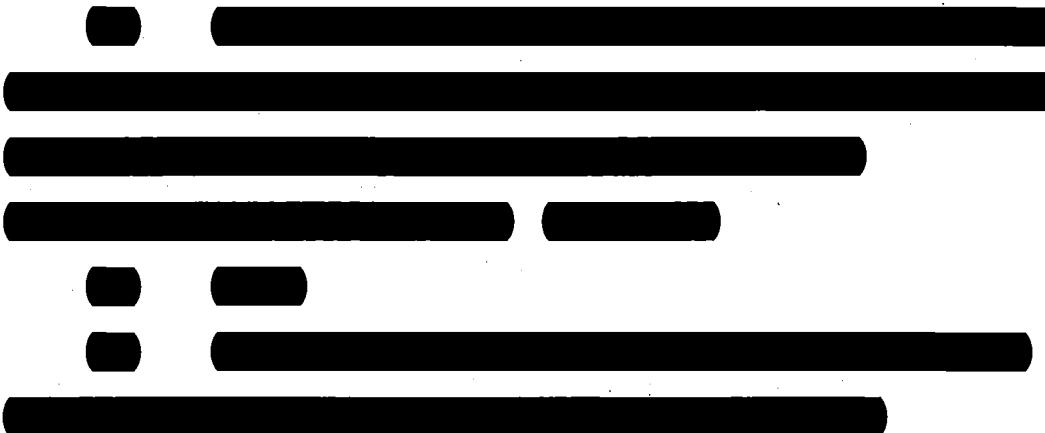


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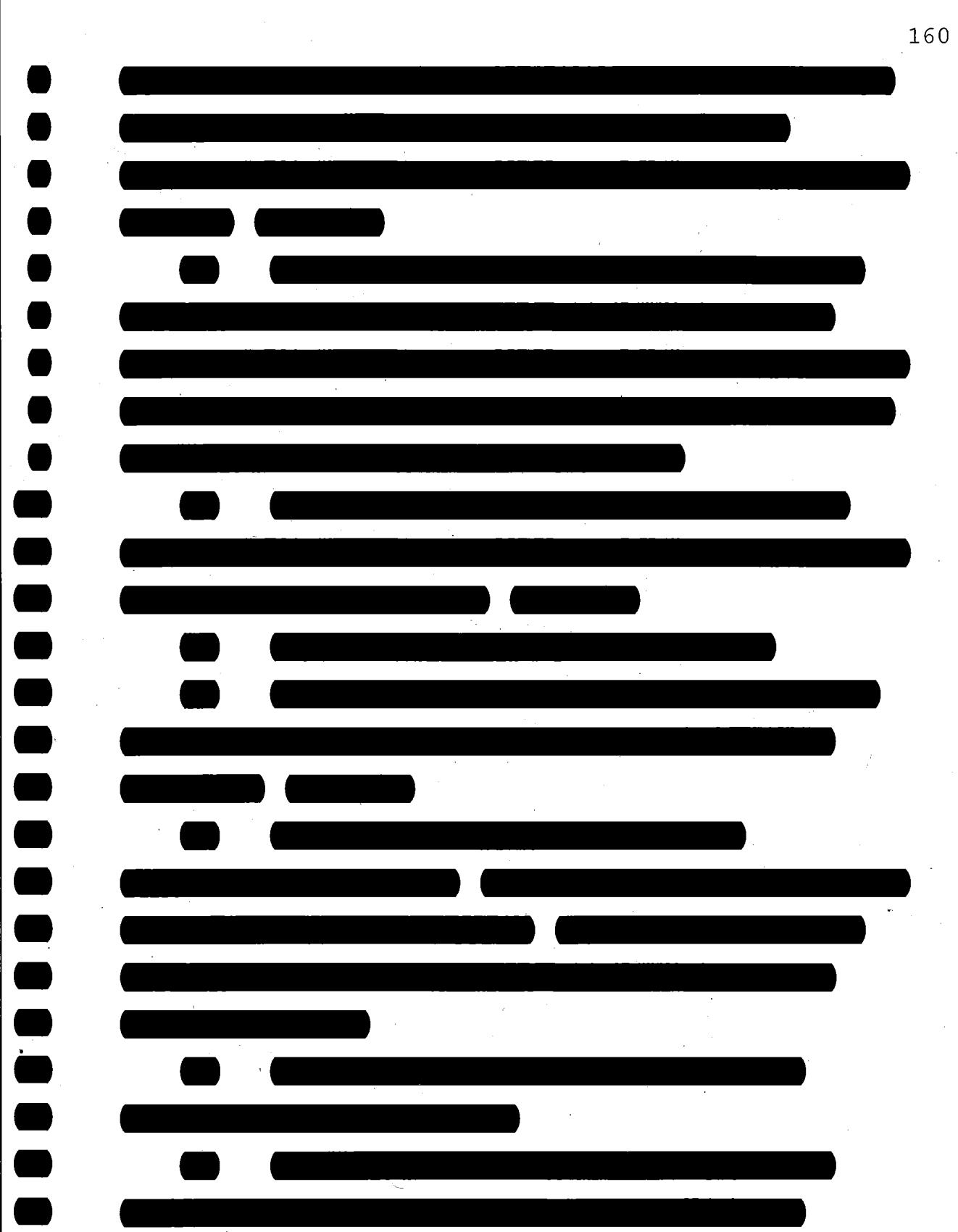


10 MR. PURCELL: Let's change the tape.  
11 THE VIDEOGRAPHER: The time is 2:56 p.m.  
12 we are going off the record. This will be the end  
13 of tape 3 in the deposition of Dr. Iain Cockburn.  
14 (Short recess taken.)  
15 THE VIDEOGRAPHER: We are back on the  
16 record. This is tape number 4. The time is 3:05  
17 p.m. This is the deposition of Dr. Iain Cockburn.  
18 BY MR. PURCELL:



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1 complementary products to your platform in ensuring  
2 its success and so forth. It's not just that the  
3 APIs are required in order to attract the Java  
4 developer community. It's that the Java developer  
5 community, being involved, being engaged in  
6 increasing numbers in the Android ecosystem, is a  
7 critical part of the business model and generates a  
8 substantial amount of the value to Google of  
9 Android.

10 So the qualitative evidence in the record,  
11 my understanding of the basic economics of the  
12 situation and indeed some of the evidence from the  
13 conjoint study as to user value of applications all  
14 go into my opinion that it is at least 12.5 percent.  
15 I think that's a very low number and could be a lot  
16 higher.

17 Q. How high could it be?

18 A. Well, if the ability to develop a vibrant  
19 application developer community is make or break for  
20 this platform, as it appears to have been for other  
21 attempts to create such ecosystems such as, if you  
22 like, the last gasp of Palm as an independent  
23 platform, trying to sell a Palm OS or recent efforts  
24 to reincarnate WebOS, many of these things seem to  
25 be perfectly good technologies in terms of their

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1       technical merit. It is just that they fail in the  
2       marketplace because they cannot attract the supply  
3       of complementary applications.

4                   So if it was indeed the case that not  
5       having access to the core Java APIs was going to  
6       throw sufficient sand into the gears of the virtuous  
7       circle or the positive feedback loop which drives  
8       these dynamics, then it might well be the case that  
9       Android would have been a complete flop purely on  
10      those grounds, in which case you might argue that  
11      100 percent of the value of the agreement could be  
12      attributed just to the copyrights.

13          Q.     And is that in addition to the 50 percent  
14      or more that could be attributed to the patents?

15          A.     That would trump the patents. That's not  
16      going to be additive. It can't be more than a  
17      hundred percent of the value.

18          Q.     My question was somewhat facetious.

19                   So how do you get to the 12-1/2 percent,  
20      given those qualitative inputs and Dr. Shugan's  
21      conjoint analysis? Why do you pick 12-1/2 percent  
22      rather than some other number?

23          A.     By looking, if you like, for a floor or  
24      lower bound on this number, I was certainly guided  
25      in my thinking by a recognition that the conjoint

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1                   COURT REPORTER'S CERTIFICATE

2                   I, J. Edward Varallo, RMR, CRR, Registered  
3                   Professional Reporter and Notary Public in the  
4                   Commonwealth of Massachusetts (my commission expires  
5                   12/24/2015), hereby certify that the deposition of  
6                   Iain M. Cockburn, Ph.D. taken on February 10, 2012,  
7                   in the matter of Oracle America, Inc. v. Google Inc.  
8                   was recorded by me stenographically and transcribed;  
9                   that before being sworn by me, the deponent provided  
10                  satisfactory evidence of identification as required  
11                  by Executive Order 455 (03-13) of the Governor.

12                  I certify that the deposition transcript  
13                  produced by me is true and accurate to the best of  
14                  my ability.

15                  I certify further that I am not counsel,  
16                  attorney, or relative of any party litigant, and  
17                  have no interest, financial or otherwise, in the  
18                  outcome of this suit.

19

20

21

22

23

24                  DATED: 2/20/2012

J. Edward Varallo

25